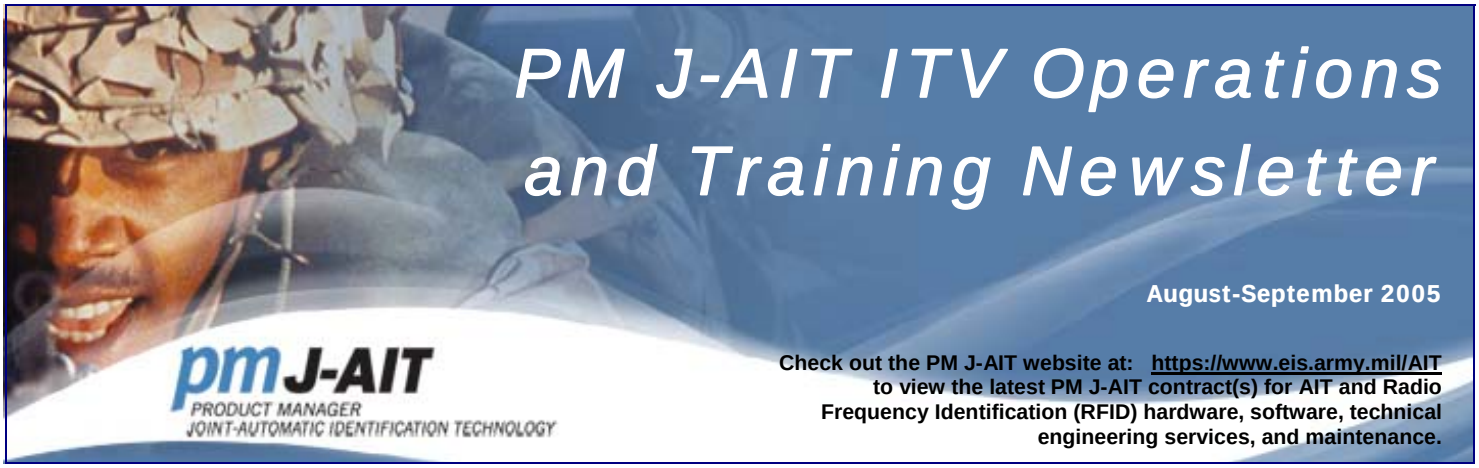


PM J-AIT ITV Operations and Training Newsletter

August-September 2005

pmJ-AIT
PRODUCT MANAGER
JOINT-AUTOMATIC IDENTIFICATION TECHNOLOGY

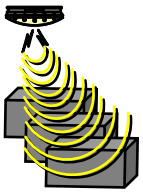
Check out the PM J-AIT website at: https://www.eis.army.mil/AIT to view the latest PM J-AIT contract(s) for AIT and Radio Frequency Identification (RFID) hardware, software, technical engineering services, and maintenance.

Over Interrogation of RFID Tags

Vendor specified shelf life of an RFID tag battery is approximately four years. However, the number of times a tag is read by an interrogator can impact the longevity of the life of a battery. Consequently, over-interrogation of a tag will seriously degrade the longevity of the tag battery. Consider the cost of RFID tag batteries:

Adverse weather conditions and improper storage will also affect the longevity of the life of a battery.

Item	NSN	Cost/DLA Managed
3.6V battery non-rechargeable for 410 tag	6135-01-301-8776	$2.96/ea or $148/box
3.6V lithium battery for the ST-654 tag	6135-01-524-7621	$6.15/ea or $307.50/box



For this month's report, we have looked at over 8,300 tags during the period of 1 Jun 05 – 15 Aug 05. Over 2,200 tags, or 27%, were being over-interrogated. While there is no standard for what constitutes "over-interrogation," anything over 300 hits in a one-day period is a reasonable benchmark that we used for this study. At the current price, the replacement cost for batteries of the 27% of tags that are being over-interrogated costs the DoD over $6,600 per year (based on the cost for 410 tag batteries). Imagine what those costs would be if applied to the entire DoD inventory of RFID tags! But more importantly, batteries of over-interrogated tags will die in transit, ending In-Transit Visibility (ITV) for those shipments.

Region	# of tags read	# of tags over-interrogated	% of tags over-interrogated
National	4,977	781	16%
SWA	1,102	627	57%
Pacific	1,638	571	35%
European	631	259	41%
GRANDTOTALS	8,348	2,238	27%

Due to the high volume of tags that move through the system, we are only able to view a selected/limited sampling. The discrepancies provided below may or may not be representative of the performance at your location, but we ask that you review these sites to determine if there may be a problem. Individual tag numbers by location can be provided upon request.

If you have any questions or comments, please contact the following points of contact:

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If this newsletter has been forwarded to you and you would like to be added to the distribution list, please send your request via E-mail to PM J-AIT (Jerry Rodgers) at jerry.d.rodgers@us.army.mil.

CONUS Sites

We looked at approximately 5,000 tags from CONUS sites and found that 16% of them were being over-interrogated. Some of the CONUS sites with a high percentage of over-interrogated tags were:

Interrogator ID	Interrogator Name	Interrogator Description
23140	CHARLESTONAFBR4	CHARLESTON AFB 437 APS FLIGHTLINE
25365	DOVERC5RAMP	DOVER DE APOE C5 RAMP
25498	MCGUIREAFBR1	MCGUIRE AFB NJ FLIGHTLINE ARR/DEP
23215	DOVERTRUCK	DOVER DE APOE ARRIVAL/DEPARTURE
23191	HUNTERR2	HUNTER AAF GA DAACG OPERATION FACILITY FACILITY
40848	LEJEUNETMOR1	LEJEUNE NC TMO BLDG 1011
24030	DDAGR1	ALBANY GA DEFENSE DEPOT
21720	BRAGGR1	POPE AFB NC ARRIVE/DEPART
26115	CHARLSTNR1	CHARLESTON SC TC DOCK CONVOY
23310	BRAGGR4-1	BRAGG NC CENTRAL RECEIVING
26109	RILEYR1	RILEY KS CAMP FUNSTON ARR/DEP
24353	TRAVISAFBR1	TRAVIS AFB CA ARR/DEP
24427	NORFOLKNATR1	NORFOLK VA NAT CARGO DOCK ARR/DEP
21212	EUSTISR6	EUSTIS VA FT STORYAMPHIBIOUS ARR/DEP
21530	TRACYR2	TRACY CA TRUCK GATE ARR/DEP
25478	PHILAPORTR2	PHILADELPHIA PA PACKER AVE PIER – EEDSK
21363	DRUMR7	DRUM NY RAPID DEPLOYMENT BLDG.
41698	HOODR20-S	HOOD TX WGS BLDG 90031 SARSS
41509	CAMPBELLR11-S	CAMPBELL KY WGC BUILDING 5505B SARSS

SWA Sites

We looked at over 1,600 tags from CENTCOM sites and found that 57% of them were being over-interrogated. Most of the tags that were over-interrogated appear to be in a staging area. Some of the sites with a high percentage of over-interrogated tags were:

Interrogator ID	Interrogator Name	Interrogator Description
41185	ARIFJANR11-S	ARIFJAN KU MULTICLASS (W7Z) SARSS
23053	BAGRAMR1	BAGRAM AF ADACG
23273	KANDAHARR1	KANDAHAR AF ADACG
25367	CALDWELLR1	KIRKUSH IZ SSA
22312	TALLILR1	TALLIL IZ FORWARD DISTRBUTION POINT
40740	DJIBOUTIR3-S	LEMONIER DJ SSA (WYX) SARSS
24825	SALERNOR1	SALERNO AF F.O.B. ASP INBOUND/OUTBOUND
23304	WARHORSER1	BAQUBAH IZ SSA
23071	K2R1	K2 UZ GATE INBOUND/OUTBOUND
40675	BAGRAMR4-S	BAGRAM AF AVIATION SSA (W9Z) SARSS
23278	SPEICHERR5	TIKRIT IZ ROTARY AIRFIELD IN/OUTBOUND
23338	JEBELALIR1	JEBEL ALI UAE NAVAL WAREHOUSE 66

Pacific Sites

We looked at close to 1,100 tags from PACOM sites and found that 35% of them were being over-interrogated. It was noted during the analysis that several sites had tags that had a “TK6” posted--indicating that it had reached its final designation. However, the tags sat near the interrogator and continued to be read. Some of the sites with a high percentage of over-interrogated tags were:

Interrogator ID	Interrogator Name	Interrogator Description
22246	OSANABR2	OSAN AB KS CARGO GATE BLDG 632
25755	OSANABR1-1	OSAN AB KS FLIGHT LINE BLDG 661
26070	ANDERSENAFBR1	ANDERSEN AFB GQ 36 MUNS EEDSK

40804	HUMPHREYSR6-S	HUMPHREYS KS AC1 MSCK GSDB SARSS
25793	GWANCHONR1	GWANCHON KS AMMO DEPOT#6
40622	CARROLLR4-S	CARROLL KS AKT 20TH SG SP60 W/H SARSS
22197	CARROLLR2	CARROLL KS MSCK GATE ARRIVE/DEPART
40473	SHOFIELDR17-S	SHOFIELD HI W21 325 FSB CL 2 4 9 SARSS
25787	HUMPHREYSR3	HUMPHREYS KS MSC-K GSDB DISTRIBUTION

European Sites

We looked at over to 600 tags at European sites and found that 41% of them were being over-interrogated. It was noted during this analysis that there are what appear to be boxes of new tags sitting near the interrogator at HANAUR2-S. Many of these tags have an excess of 60,000 hits. Some of the sites with a high percentage of over-interrogated tags were:

Interrogator ID	Interrogator Name	Interrogator Description
40726	BAUMHOLDERR1-S	BAUMHOLDER GM 47TH FSB AMX SARSS
40540	KAISERR4-S	KAISERSLAUTERN GM SECURE STG WQD SARSS
40565	HANAUR2-S	HANAU GM QMS SSA WRF SARSS
40811	KAISERR3-S	KAISERSLAUTERN GM WQF CRP SARSS1
40722	HANAUR4-S	HANAU GM 71 ORD CO SSA ADX SARSS

Fighting Over-interrogation

RF tags with dead batteries will not be read by interrogators, thus terminating ITV for those shipments. In order to extend battery life and maintain visibility of your shipment, if tagged shipments are being staged, move tagged items further from the interrogator. Turn the battery around if your shipment has reached its destination or if the item is not scheduled for movement. Be sure to verify that the batteries are activated or in the "ON" position when your shipment is ready for movement. If you need assistance with what appears to be over-interrogation at your site, contact your supporting Field Service Engineer (FSE) or one of the points of contact listed on the front page of this newsletter.

AIT-III Handheld Terminals

Problem:
Intermec discovered a problem with the disable (assured deactivation) radio functions in the 751G, CK31G, and CN2G AIT-III Handheld Terminals (HHTs). Their integrated radios were configured to be turned-off, but during power up and re-booting, the radios reactivated, turned-on, then turned-off after a few seconds.

Solution:
Intermec has identified a software patch to fix the problem for each of the HHTs. All HHTs shipped after June 16, 2005 have the software patch installed. All HHTs shipped prior to June 16, 2005 will require the installation of the software patch. Intermec is working with PM J-AIT to determine the software patch distribution and installation procedures for the HHTs shipped prior to June 16, 2005.

CN2G

751G

CK31G

POC: Marie Finely
Logistics Management Specialist
PM J-AIT
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AKO email: marie.finley@us.army.mil

Reggie Bagby, Deputy PM J-AIT Reassigned

PM J-AIT acknowledges the departure of one of the stalwarts of the RF-ITV community. Reginald Bagby, long-time Deputy PM J-AIT, was recently selected to be the Director, Operations and Mission Support Directorate for the Program Executive Officer, Enterprise Information Systems (PEO EIS), Ft. Belvoir, VA. "Reggie," as we all knew him, provided outstanding leadership to the staff of PM J-AIT during an extraordinary period of RFID technology advancement and expansion of the worldwide Radio Frequency In-Transit Visibility (RF-ITV) infrastructure. He led us through some exciting challenges and fostered a warm and friendly work environment. We will miss him and extend our hearty congratulations and best wishes to Mr. Bagby and his family. Mr. Tom Neff is currently acting as the Deputy, PM J-AIT.

RF-ITV System

By Lee Weaver, Chief, RF-ITV System, PM J-AIT

The RF-ITV system is a mission essential information system that supports Warfighter operations. While there are various system descriptions for ITV, the following is the official system definition for RF-ITV as stated in the Army Information Technology Registry (AITR):

> "Radio Frequency In-Transit Visibility (RF-ITV) uses Radio Frequency Identification (RFID) devices to support the dissemination of In-Transit Visibility (ITV) information required by the Department of Defense (DoD), our Coalition Partners, and Allies of the United States. The RF-ITV system uses Radio Frequency (RF) tags to trace the identity, status, and location of cargo from origin (depot or vendor) to destination. It also receives real-time position reports for conveyances from numerous Satellite Tracking Systems (STS). Data from these two technology devices is combined, processed, and accessed via web-based maps and reports, and provides global, logistics support to the Joint warfighter."

To provide RFID capability, commercially produced, active, RF identifier components are used to provide a low cost and deployable means to track and trace, not only major end items such as vehicles (unit move), but also containers or pallets of supplies (sustainment). RF tags can identify the contents of trucks, shipping containers, and air pallets at their last reported location. RF tags are read automatically when queried by fixed RF interrogators at air and seaports of embarkation and debarkation, at other transportation nodes and choke points, and at receiving activities.

The integration of RF tags and STSs is called ITV–Integrated (ITV-I). Data from these two types of Automatic Identification Technology (AIT) devices are combined and processed to provide a map-based, Graphical User Interface (GUI). Currently, RF tag data from the RFID database can be combined with STS data from the ITV-I database to create manifest data. Numerous STS devices, utilizing Global Positioning System (GPS), report location information to their base stations, which in turn interface with the ITV-I Message Processor of the RF-ITV system.

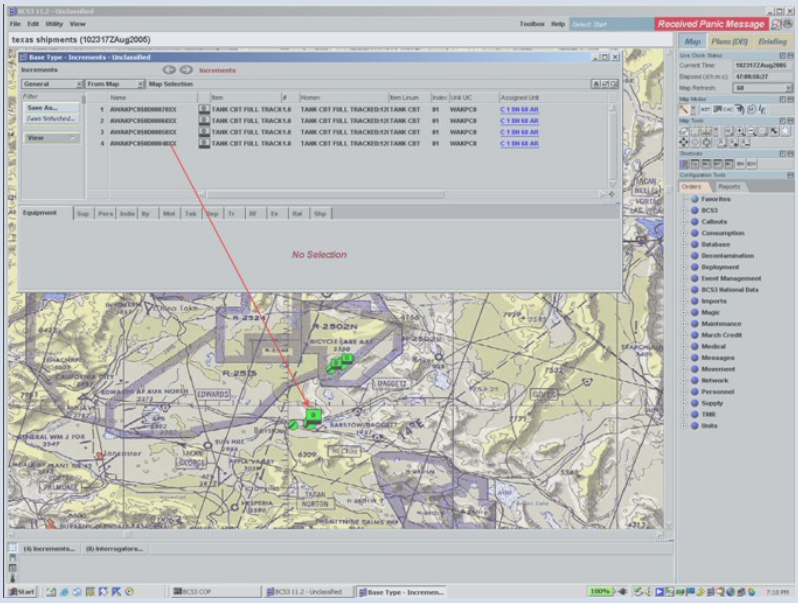
New "URL" for the National RF-ITV Server

Effective with the recent move of the National ITV server to Oklahoma City, Oklahoma, there is a new Web address (URL) for the National (CONUS) ITV server. The new URL is: https://national.rfitv.army.mil/login . For the immediate future, users attempting login at the old URL will be redirected to the new URL.

From and For the Field…

ITV and RFID Training at Fort Carson

On 25-29 Jul 05, CASCOM personnel deployed to Fort Carson to provide RF tagging support to the 3rd Brigade Combat Team (BCT). With the help of Patty Martinez and Orville Jewell from the Installation Transportation Office (ITO), 30 vehicles from 3 different infantry companies were tagged. The purpose of this tagging was to provide a test bed database to support the Battle Command Sustainment and Support System (BCS3) users of the 3rd BCT as they monitored the arrival of unit equipment at the National Training Center (NTC) at Fort Irwin. Using the data provided from the tags and interface with the ITV server, soldiers using BCS3 were able to view the movement of the tagged tracked and wheeled vehicles as they passed by fixed interrogators on the movement from Fort Carson to the NTC. In addition, formal classroom ITV and RFID operations training were provided to Combat Service Support Automation Management Office (CSSAMO), Logistics Assistance Representative (LAR), and ITO personnel during this period.



The US Army Reserve Soldiers Receive ITV and RFID Training

The US Army Reserve Soldiers from the 9th Logistics Command also received ITV and RFID operations training as part of their pre-deployment training. The training consisted of instruction in RFID operations and ITV Server data management. ITV training was conducted in conjunction with other logistics automation, Movement Tracking System (MTS) and distribution management training provided to the 9th LOG CMD by the US Army Quartermaster School in preparation for their subsequent deployment to South West Asia in support of Operation Iraqi Freedom.

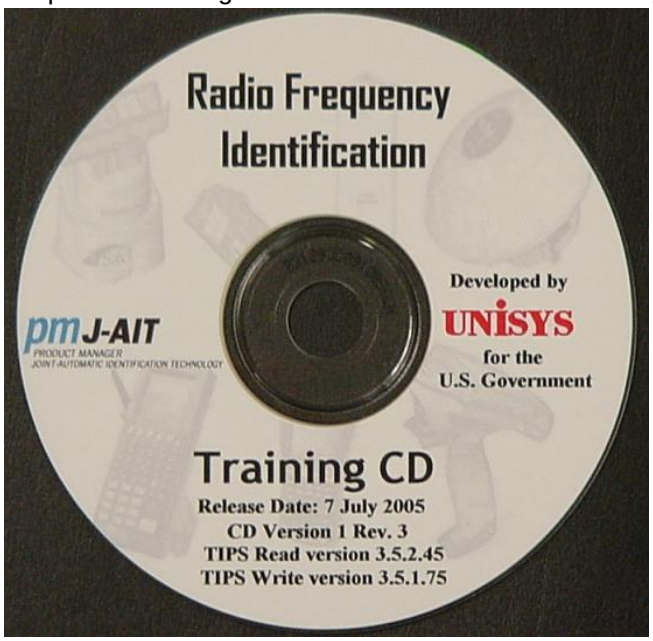
2005 ITV Server Guide and 2005 RFID Operations Guide:
http://www.cascom.army.mil/Automation/ITV/index.htm

TIPS Write and Read Operations Tutorial:
https://national.rfitv.army.mil/TT/

ITV Servers:
National (CONUS): : https://national.rfitv.army.mil/login
Europe: https://europeitv.aelog.army.mil/
Pacific: https://usfkitv.korea.army.mil
Southwest Asia: https://cenitv1.arifjan.arcent.army.mil
Training: https://trainer.rfitv.army.mil

RFID Training CD in Development

A new RF-ITV Training CD (Version 1 Rev. 3), in development, will provide training for users on the RF-ITV Web site, Early Entry Deployment Support Kit (EEDSK), writing data to an RF tag and registering a read station. Training will be menu driven allowing the user to select the type of training best suited for their needs.



This CD will be able to be used as a reference tool for those who have already completed the RFID course, a refresher for specific information, or even as an introduction to RF-ITV operations. The RF-ITV training CD will contain more than just training classes, it also will include operations manuals and directions to obtain current versions of Government-Off-The-Shelf (GOTS) software for read and write stations.

This is a summary of the information that we anticipate will be available on the new training CD:

1. **Training Presentations**: PowerPoint presentations will provide step-by-step procedures on the most commonly faced scenarios in RF-ITV operations. PowerPoint presentations can be run on most PCs with Microsoft Office software or PowerPoint Viewer. Users may also print out selected PowerPoint slides to use as reference sheets away from the PC. These presentations will cover six essential blocks of instructions including RFID Introduction/Overview, ITV Web Operations, Communications (installation and configuration), Write Operations, Read Operations, and Handheld Operations.

   Step-by-step instructions will include:

   - Setup, register, and operate a write station to write RF tags.
   - Setup, register, and operate a read station to collect RF tags.
   - Setup and configure various connection methods including the Iridium satellite phone.
   - Navigate and perform various queries on the ITV Web Server.
   - Setup and operate various handheld interrogators including the following models: Intermec 410, Symbol PDT 7200, and the Symbol 8146.
   - Identify components of the EEDSK as well as how to setup and operate various configurations of an EEDSK.

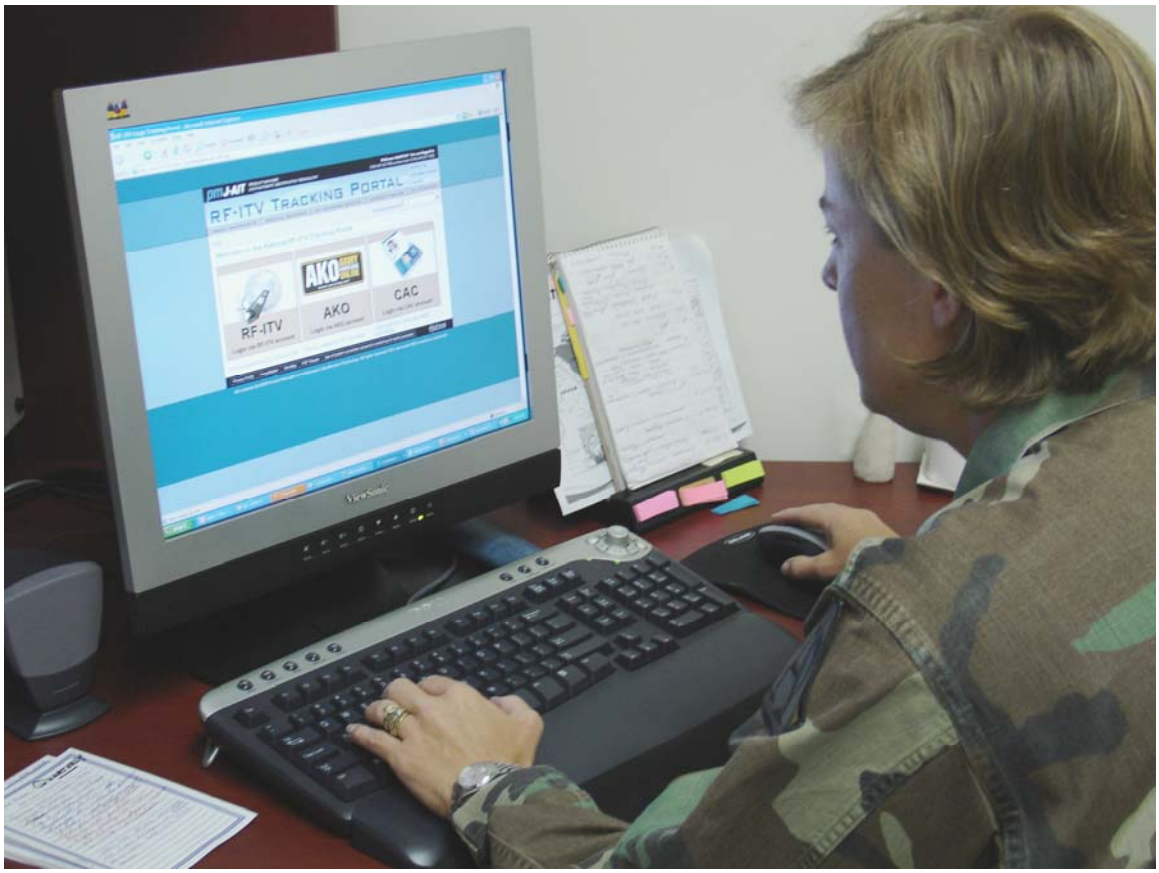
2. **EEDSK Operations Manual:** The EEDSK allows the user to establish a read or write station in a remote location. The kit provides all the hardware necessary for RF-ITV operations except for electrical power (12 or 24 volts DC or 110-240 volts AC). The training CD will contain the EEDSK operations manual describing how to set up the kit for either read or write operations.

3. **Software:** Training will be developed to guide the user through currently used read/write software.

4. **Links to all of the RF-ITV Web pages.** These links allow the user to quickly access the four regional RF-ITV servers around the world (National (CONUS), SWA, Europe, and Pacific). There is also a link to the training server in Virginia.

RF-ITV Server Web Page Redesign—The Latest

As we mentioned in the last newsletter, the ITV server user interface has undergone a new design and front-end enhancement to make it more user-friendly and easier to navigate. As shown below, the server's user interface has also been renamed as the "RF-ITV Tracking Portal." This site is still in the beta test phase, but the overall site will be much easier to read and navigate through each report or query request. The functionality of the site has remained the same, and PM J-AIT anticipates that the site will go live early this Fall. Stay tuned for more information in the next newsletter.



LTC Rowley, PM J-AIT, navigates through the beta site for the updated RF-ITV server portal.